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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,301	12/13/2005	Andrew De Mello	82127	6128

7590 09/20/2006

Intellectual Property Practice Group  
Warner Norcross & Judd  
900 Fifth Third Center  
111 Lyon Street NW  
Grand Rapids, MI 49503-2487

EXAMINER
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VANOY, TIMOTHY C

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/501,301

Applicant(s)

MELLO ET AL.

Examiner

Timothy C. Vanoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12 July 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: (i) it omits the country in both the residence and post office addresses for all the inventors, and (ii) the date is missing for the signature of the inventor Joshua Edel.

### ***Specification***

- a) The specification is objected to because it omits a "Brief Description of the Drawings" section and header.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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a) Claim 1 does not particularly point out and distinctly set forth any of the method steps for the claimed method for producing nanoparticles by using a continuous flow miniaturized reaction vessel. The claim raises the question: what are the method steps when using the continuous flow miniaturized reaction vessel?

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by the English abstract of DE 199 25 184 A1 (hence "DE-184").

The English abstract of DE-184 describes a continuous method for preparing micro- or nano-particles from materials by using a micro-mixer. An independent claim is included for the micro-particles obtained by the process. By using a micro-mixer, micro- or nano-particles can be obtained by a continuous process.

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Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/23181 to Wang et al.

Fig. 2 and the description of Fig. 2 set forth on pg. 5 lines 19 et seq. in the Wang et al. application describes a method for making nanometer-sized particles (please also see the abstract) by pumping a reagent solution (metal ion solution) 20 and a precipitating agent solution (reactant solution) 30 from the individual containers so that the two solutions meet in a junction 12 (where evidently the solutions begin to react to form the nanoparticles which appear to be discharged from junction 12 via line 13).

Claims 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent 6,537,506 B1 to Schwalbe et al.

The title and abstract of the Schwalbe et al. patent describes a miniaturized reaction apparatus comprising heat transfer fluid pathways; two reactant fluid pathways and one product fluid pathway.

Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent 6,036,927 to Chatterjee et al.

Fig. 3a and the description of Fig. 3a set forth in col. 4 Ins. 59 et seq. illustrates a micro-reactor comprising what appears to be two reagent flow paths 34. It appears that the reagents flow down the flow paths 34 until they meet in common area 35 (i. e. "exiting chamber 35": please see col. 4 Ins. 64-65), which is equipped with a discharge

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hole 42 located at the bottom of the common area 35. The reactor is equipped with an embedded heating element 38: please also see col. 5 lns. 61-62.

U. S. Patent Application Publication No. US 2004/0025634 A1 disclosing the preparation of nanoparticles in what appears to be a miniaturized reactor is made of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Timothy C Vandy*  
Timothy C Vandy  
Primary Examiner  
Art Unit 1754

tv